REMARKS

In the instant Office Action, each of claims 1-28 was rejected in view of a defective declaration, claims 1-13 were deemed allowable with the filing of a supplemental reissue declaration, and claims 23, 24, and 28 were also noted as defining patentable subject matter.

The Declaration was objected to by the Examiner because the Examiner apparently did not receive form PTO/SB/02b with the declaration as filed. Accordingly, Applicants submit herewith a new declaration including the appropriate form identifying the foreign priority application.

Accordingly, claims 23 and 28 are now presented in independent form and are believed to be in condition for allowance. Likewise, claim 24 depends from claim 23 and is allowable for at least those reasons for which claim 23 is allowable.

Therefore claims 1-13, 23-24 and 28 are believed to now be allowable.

Claims 14-22 and 25

Independent claim 14 was rejected under 35 U.S.C. §251 under the recapture doctrine. In particular, the Office Action states that "axially extending projections" was a key limitation added to overcome a prior art rejection in the original patent application. Further, the Office Action recites a portion of an argument previously made with regard to the Glenn reference and Applicants' coupling projections.

However, singular focus on the projections of the coupling is not proper because the prior amendment and response clearly set forth a plurality of failings and short comings of the Glenn reference. For example, it was noted that the Glenn reference discloses a carburetor for a four-stroke, eight cylinder automotive engine. In that engine, fuel is supplied to all eight cylinders under certain operating conditions and only four of the cylinders under other conditions to improve fuel

efficiency. When only four of the cylinders are supplied with fuel, a large quantity of air is supplied to the other four cylinders to prevent them from producing a significant load or drag on the engine and avoid generation of excess heat. Thus, as was noted in the original patent application, the Glenn reference discloses a different structure with a different construction and arrangement for different purposes then Applicants' carburetor construction. The prior response continued by noting that the particular construction and arrangement of the apparatus in Glenn, including two fuel and air mixing passages, and at least one air passage, which are all necessary to accomplish the objectives in Glenn noted above.

Accordingly, the axially extending projections were not and are not necessary to define over the prior art, nor were Applicants' arguments limited to or focused on any such projections. The Glenn reference includes a number of differences and deficiencies with respect to the claims of the instant application. Applicants did not rely on the axially extending projection limitation or discussion thereof in order to distinguish over the several significant differences and deficiencies in the Glenn reference. Accordingly, the recapture doctrine does not require inclusion of this limitation in this case. Indeed, the discussion in the original application response with regard to Glenn lists the coupling projections as one of several differences between the claims of the instant application and Glenn, does not disclose that the projections are axial in any manner, and is open ended as clearly supported by the context of the discussion such that it is clear that axially extending projections were not necessary to overcome the rejection of any claim. Rather, Applicants made it clear that the Glenn reference failed on many fronts to meet the claim limitations, including limitations other than the projections.

Claim 14, as amended herein, is also of different scope than the previously presented claims referred to in the office action. In particular, the carburetor as now set forth in claim 14 is such that

when the throttle valve is in its idle position the air valve is closed and is not connected to the throttle valve. Further, the throttle valve can be moved a predetermined amount from its idle position while the air valve is still closed and before the air valve is connected to the throttle valve for movement from its closed position. For at least all the foregoing reasons, in addition to the amendments to claim 14, the recapture doctrine is not applicable to claim 14.

Claim 14 herein is also narrower in scope with respect to its recited coupling construction than original application independent claim 12 (added by a preliminary amendment before the first Office Action and cancelled in the response to the first Office Action) and thus the recapture doctrine is inapplicable to claim 14 and all of the other claims herein.

Claim 14

Independent claim 14 has also been rejected under §102(b) or in the alternative under §103(a) over the Simonet patent. Contrary to the assertions in the Office Action, Simonet does not disclose a scavenging air passage, or any scavenging passage of any kind. Instead, Simonet discloses a float bowl carburetor that is arranged to provide a stratified charge to an engine cylinder to improve combustion of the charge in the cylinder. As admitted in the Office Action, Simonet does not disclose or suggest that the throttle valve and air valve open at different times. Further, the language cited in the Office Action does not teach or even suggest that the first throttle 7 and second throttle 6 open at different times.

Rather, Simonet merely states that the two throttles 6 and 7 may be modified or replaced "such that the two throttles do not rock simultaneously by equal angles." Contrary to the assertion in the Office Action, it is not inherent or obvious to one of ordinary skill in the art in view of this disclosure that the two throttles 6 and 7 in Simonet open at different times. Rather, the disclosure

merely suggests that the throttles 6 and 7 do not move by equal angles which may mean that they open at the same time but at different rates or that movement of one throttle is terminated sooner than movement of the other. In any event, without the benefit of Applicants' disclosure, there is no teaching or suggestion anywhere in Simonet, including the passage cited in the Office Action, to suggest that the throttles 6 and 7 open at different times or a throttle valve must partially open from its idle position before a closed air valve begins to open.

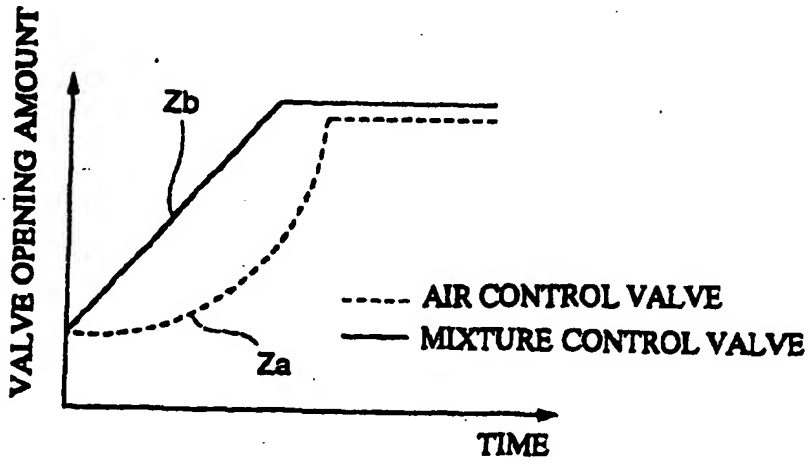
Further, Simonet is directed to an entirely different problem then that of the instant application as Simonet seeks to provide a stratified fuel and air charge in an engine, which is different than the timed scavenging air supply provided by a carburetor as recited in claim 14. Simonet does not disclose, teach or even suggest any air scavenging arrangement, nor is Simonet directed to any problems similar to those encountered in an air scavenged engine system.

WO98/17902 and EP0933 515 Publications

EPO Publication 933515 has been cited in an Information Disclosure Statement accompanying this response. The previously cited and considered WO98/17902 document is the priority application for this '515 Publication. This '515 publication discloses a stratified scavenged two-cycle engine that includes a fuel mixture flow rate controller 11 that is disposed adjacent to a crank chamber 1a of the engine to control the flow rate of a fuel and air mixture to the engine. A separate air flow rate controller 12 is disposed adjacent to a scavenging flow passage 3 to control the flow rate of air drawn into the scavenging flow passage 3. The air flow rate controller 12 includes a valve 12a that always permits some scavenging air flow therethrough, and controls the rate of the scavenging air flow rate as a function of the position of a throttle valve 11a of the fuel mixture controller 11. A throttle lever 23 is connected directly to the throttle valve 11a and to the

air valve 12a by way of a linkage including a first air spring 25 and a second air spring 27. The second air spring 27 has a lower spring constant than the first air spring 25. Movement of the throttle lever 23 to accelerate the engine increasingly opens the throttle valve 11a and displaces the second air spring 27. The first air spring 25 is not displaced until the force of the second air spring 27 becomes at least equal to the force of the first air spring 25 whereupon the air valve 12a will open further. This further opening of the air valve 12a is illustrated in Fig. 4 by the plot Za.

FIG.4



The '515 publication does not disclose a carburetor that has an air valve that is closed at idle, remains closed at off idle and selectively permits a scavenging air flow to an engine with which the carburetor is used only after the throttle valve is partially opened beyond idle and upon further opening of the throttle valve. Rather, the air valve 12a always permits a scavenging air flow therethrough and merely varies the flow rate of the air flow therethrough. The '515 publication also fails to disclose or even suggest a coupling selectively interconnecting the air valve and the throttle valve so that the air valve is closed and not connected to the throttle valve when the throttle valve is in its idle position, the throttle valve can be moved a predetermined amount from its idle position toward its wide open position before the air valve is connected to the throttle valve for movement

from its closed position and thereafter further opening of the throttle valve toward its wide open position simultaneously moves the air valve toward its fully open position. Rather, the air valve 12a is always open and is always connected to the throttle valve 11a by the links 21, 24, 26 and the springs 25, 27.

Accordingly, claim 14 defines patentable subject matter over Simonet and all other cited art.

Dependent Claims 15-22 and 25

Each of dependent claims 15-22 and 25 is dependent on claim 14 and defines patentable subject matter for at least the foregoing reasons for which claim 14 is patentable.

Claims 23 and 24

Original dependent claim 23 was indicated as defining allowable subject matter and has been rewritten in independent form. As amended, independent claim 23 is believed to define patentable subject matter and to be in a condition for allowance. Claim 24 is dependent on claim 23 and hence defines patentable subject matter for at least the reasons for which claim 23 was deemed to do so.

Claims 26 and 27

Original independent claim 26 was rejected under §103(a) as being unpatentable over Simonet in view of Glenn. Simonet (and the '515 publication) fails to disclose at least the limitation that the throttle valve can be moved a predetermined amount from its idle position towards its wide open position while the air valve is closed and remains closed, and thereafter further opening of the throttle valve towards its wide open position simultaneously moves the air valve toward its fully

open position. The Glenn reference fails to fill this deficiency in the Simonet reference and instead, has been cited for the "well-know use of shafts carrying air and throttle valves in a carburetor for the purpose of insuring proper rotation of the valves." Accordingly, since Glenn and Simonet (and the '515 publication) both share at least the same deficiencies with respect to independent claim 26, no combination of these references can be made which overcomes the shared deficiencies of these references. For at least the above-noted reasons, claim 26 is patentable over the cited references (even though broader in some respects than claim 14). Likewise, claim 27, which is dependent upon claim 26, is patentable over the cited references for at least these reasons for which claim 26 is patentable.

Claim 28

Claim 28 has been indicated as defining allowable subject matter, and as amended is now in independent form and believed to be in condition for allowance.

New Claims 29 and 30

Newly added independent claim 29 is similar to claim 26 but further defines the relationship between the air valve, throttle valve and the coupling such that they are constructed and arranged so that the air valve is in its fully opened position when the throttle valve is in its wide open position. In this regard, claim 29 is somewhat narrower than claim 26. Accordingly, claim 29 is patentable for at least all of the above reasons for which claim 26 is patentable. Further, new claim 30 is dependent upon claim 29 and defines patentable subject matter for at least the same reasons for which claim 29 is patentable.

New Claims 31-33

New independent claim 31 defines a carburetor for an air scavenged two-stroke engine. The carburetor includes a body having a scavenging air passage and a fuel and air mixing passage, an air valve including an air valve shaft, a throttle valve including a throttle valve shaft, and a coupling interconnecting the air valve shaft and the throttle valve shaft. The coupling includes a first half carried by the air valve shaft and having at least one projection, and a second half carried by the throttle valve shaft and having at least projection. The coupling is arranged so that the air valve is closed when the throttle valve is in its idle position, the throttle valve can be moved a predetermined amount from its idle position toward its wide open position while the air valve remains closed, and thereafter further opening of the throttle valve toward its wide open position moves the air valve towards its fully open position. None of the cited references disclose an arrangement of an air valve, throttle valve and a coupling having at least one projection on each of first and second halves to provide both the relative and simultaneous movement of the air valve and throttle valve as set forth in claim 31. Accordingly, claim 31 defines patentable subject matter over all of the cited references.

New claims 32 and 33 are each dependent on claim 31 and patentable for at least the reasons for which claim 31 is patentable. Further, claim 32 provides that the projections of the coupling extend generally radially relative to their respective shafts and claim 33 provides that the projections extend generally axially relative to their respective shafts. Radially and axially extending projections are fully supported in the specification at, for example, Column 4, lines 22-31 and Column 3, lines 5-7.

CONCLUSION

Applicants submit that all pending claims 1-33 define patentable subject matter over the cited art. Accordingly, favorable consideration and allowance of each of these claims is respectfully requested.

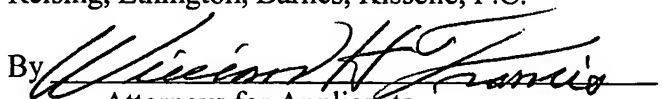
If, after considering this response the Examiner believes any of the claims is not in a condition for allowance, it is respectfully requested that the Examiner initiate a telephone interview with Applicants' undersigned attorney, William Francis, who can normally be reached Monday through Friday between 9:00 A.M. and 5:00 P.M. at telephone number (248) 689-3500, so immediate consideration can be given to any further amendment suggested by the Examiner or otherwise needed to place all of the claims in a condition for allowance.

Applicants enclose a check in the amount of $1,050 for payment of the additional claim fees, and check for $1,020 with the Petition for Extension of Time (for three months). If there are any additional fees due with this Amendment as determined by Patent Office calculations, it is hereby authorized and respectfully requested that any additional fees be charged to our Deposit Account No. 50-0852

Respectfully submitted,

Reising, Ethington, Barnes, Kisselle, P.C.

WHF:MJS:sal

By 

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Enclosures
- Declaration of Applicants
- IDS w/foreign reference and $180 ck
- Check for $1,050 for additional claim fees
- Petition for Extension of Time w/$1,020 ck